CLAIMS

1. Use of a substance that upon administration to a patient will lead to an increased concentration of growth hormone or a functionally equivalent analogue thereof for the production of a medicinal product for treatment of a CNS damage affecting neural stem cells, progenitor cells and/or cells derived from stem cells or progenitor cells.

2. Use according to claim 1, wherein said substance is growth hormone or a functionally equivalent analogue thereof.

3. Use according to claim 1, wherein said substance upon administration will increase the release of endogenous growth hormone.

4. Use according to any one of the claims 1-3, wherein said CNS damage affects the oligodendroglia, astroglia, and/or neuronal cells.

5. Use according to any one of the claims 1-4, wherein said CNS damage affects non-cholinergic neuronal cells, cholinergic neuronal cells, or glial cells.

6. Use according to any one of the claims 1-5, wherein said CNS damage is neural cell loss.

7. Use according to any one of the claims 1-6, wherein said CNS damage is caused by hypoxic injury, ischemic injury, and/or traumatic injury.

8. Use according to any one of the claims 1-7, wherein said medicinal product is formulated for intravenous infusion, intramuscular injection or subcutaneous injection.

9. Use according to any one of the claims 1-8, wherein said medicinal product is formulated so that the active substance will pass into the ventricles of the patient's brain when it is administered to a patient.

10. Use according to any one of the claims 1-9, wherein said medicinal product is formulated so that the

active substance will pass into the cerebrospinal fluid of the patient when it is administered to a patient.

11. Use of a substance that upon administration to a patient will lead to a decreased concentration of growth hormone or a functionally equivalent analogue thereof for the production of a medicinal product for treatment of an abnormal condition affecting the central nervous system, wherein said abnormal condition is the consequence of axonal damage caused by concussion, axonal damage caused by head trauma, axonal damage caused by small vessel disease in the CNS, damage to the spinal cord after disease and/or trauma.

12. Use according to claim 11, wherein said substance is a negatively regulating growth hormone binding protein, a functionally equivalent analogous thereof, an antibody against growth hormone, a biologically active growth hormone receptor inhibitor, and/or an inhibitor of endogenous growth hormone release.

13. A method of propagating progenitor cells, stem cells and/or cells derived from said cells by administration of an effective amount of growth hormone or a functionally equivalent analogue thereof to stem cells, progenitor cells, neurons astroglial cells and/or oligodendrocytes in vitro.

14. A method of inducing lineage determination or inducing or maintaining the genesis of neurons, oligodendrocytes, astroglial cells from progenitor cells or stem cells in, or derived from, the central or periferal nervous system in a patient, wherein a pharmaceutically effective amount of a substance that will lead to an increased concentration of growth hormone or a functionally equivalent analogue thereof is administered to said patient.

15. A method according to claim 14, wherein said substance is growth hormone or a functionally equivalent analogue thereof.

16. A method according to claim 14, wherein said substance is a substance that increases the release of endogenous growth hormone.

17. A method according to claim 14, for treatment of an abnormal condition affecting the nervous system of a patient.

18. A method according to claim 17, wherein said condition affects the oligodendroglia, astroglia, and/or neuronal cells.

19. A method according to claim 17, wherein said condition affects the non-cholinergic neuronal cells, cholinergic neuronal cells, or glial cells.

20. A method according to claim 17, wherein said condition is a CNS damage or deficit.

21. A method according to claim 20, wherein said condition is neural cell loss.

22. A method according to claim 20, wherein said condition is memory loss.

23. A method according to claim 20, wherein said condition is caused by at least one factor selected from the group consisting of multiple sclerosis, hypoxic injury, ischemic injury, traumatic injury, Parkinson's disease, and demyelinating disorder.

24. A method according to claim 14, wherein said substance is administered by intravenous infusion, intramuscular injection or subcutaneous injection.

25. A method according to claim 14, wherein brain cells are removed from the patient after said administration, said brain cells then being propagated in vitro, followed by transplantation of the obtained cells back into the brains of the patient.

26. A method according to claim 25, wherein an effective amount of growth hormone or a functionally equivalent analogue thereof is administered to said brain cells during in vitro propagation.

27. A method of reducing the genesis of oligodendrocytes, neurons, astroglial cells from progenitor cells or

stem cells in, or derived from, the central or periferal nervous system in a patient, wherein a pharmaceutically effective amount of a substance that will lead to a decreased concentration of growth hormone or a functionally equivalent analogue thereof is administered to said patient.

28. A method according to claim 27, wherein said substance is administration to the periferal or central nervous system of said patient.

29. A method according to claim 27, wherein said substance is selected from the group consisting of negatively regulating growth hormone binding proteins, functionally equivalent analogous thereof, antibodies against growth hormone, biologically active growth hormone receptor inhibitors, and inhibitors of endogenous GH release.

30. A method according to claim 27, for treatment of a central nervous system injury.

31. A method according to claim 30, wherein said injury is the consequences of a factor selected from the group consisting of axonal damage caused by concussion, axonal damage caused by head trauma, axonal damage caused by small vessel disease in the CNS, damage to the spinal cord after disease or trauma.

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